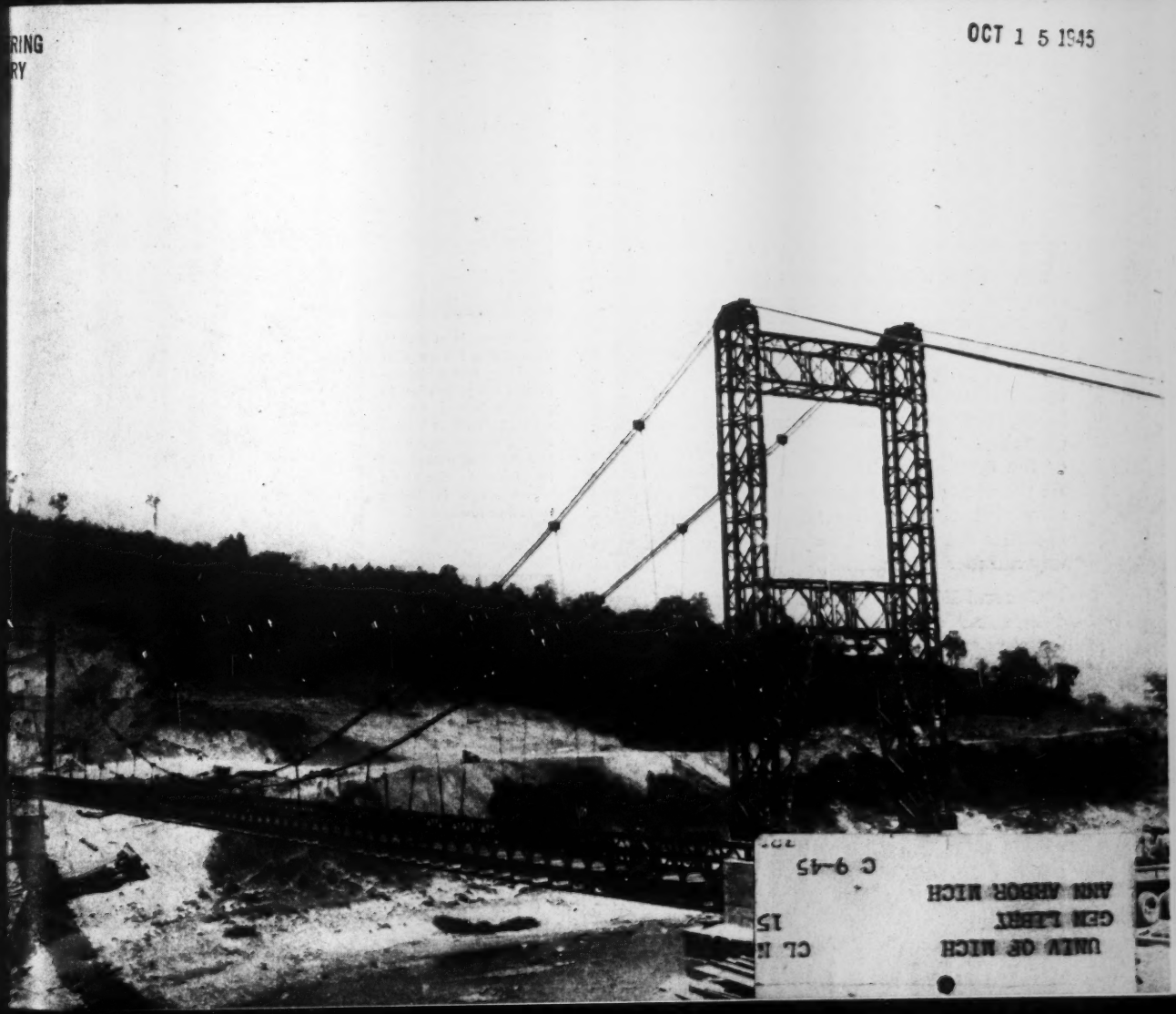
# ENGINEERING NEWS-RECORD

Longest span U. S. military bridge is built of Bailey units in the China-Burma area.



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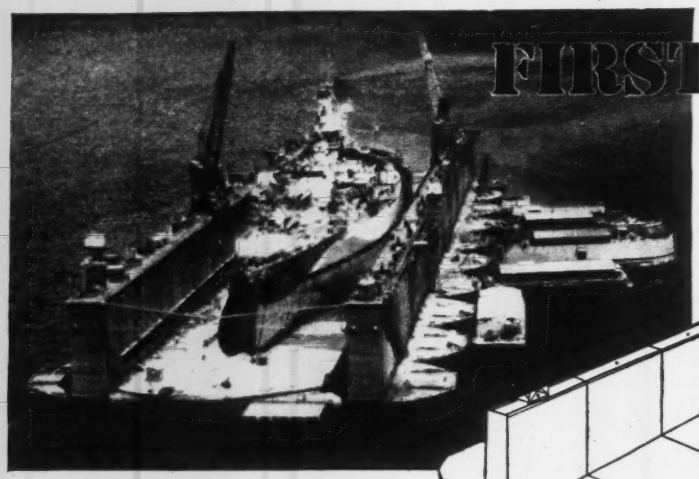
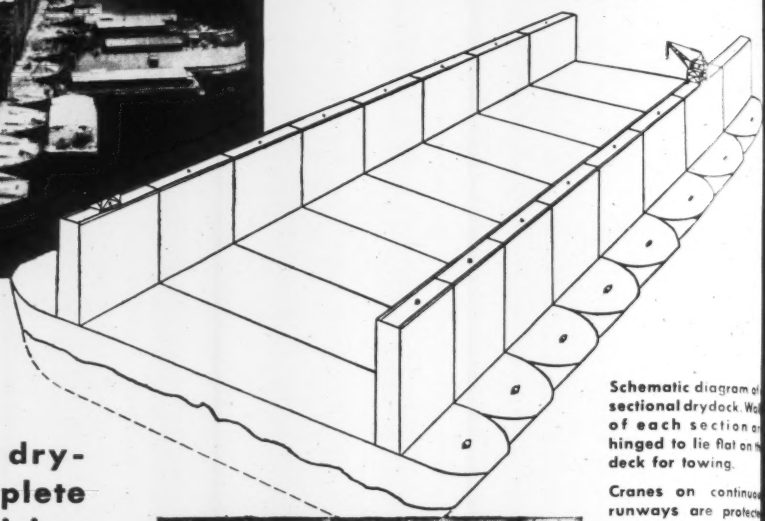
# FIRST AID STATION for FIGHTING SHIPS



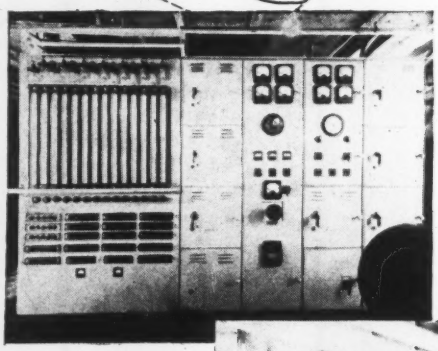
Ten-section floating drydock servicing a battleship somewhere in the Pacific. (Official U. S. Navy Photo)



Schematic diagram of sectional drydock. Wall of each section is hinged to lie flat on the deck for towing.

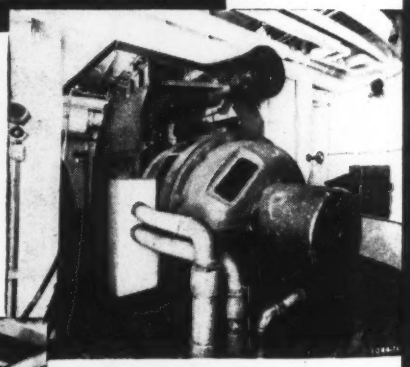
Cranes on continuous runways are protected against overloading by specially designed G-E stability gages.

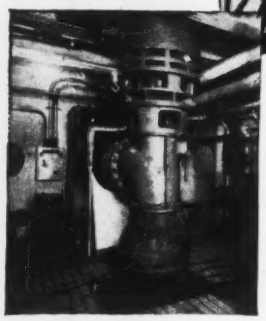
**Sectional, floating drydock provides complete facilities for servicing even the largest ships of our Navy. G-E engineering and equipment speeded this program.**



Switchgear is compact, in sections for ease of handling, and metal enclosed for protection to personnel and equipment. Indicating instruments enable operator to determine water level in ballast chambers when dock is being raised or lowered.

BUY WAR BONDS





G-E 350-kw generator with direct-connected exciter on Ingersoll-Rand diesel engine in hull machinery room of one section. This set helps supply power for pump motors of all types and motors on air compressors, ventilating fans, refrigerating units, capstans, and anchor windlasses.

One of the four dewatering pumps located in each section to control bouyancy. The G-E motors are controlled from the switchgear station shown above.

WITHIN the hull and wing walls of each section of these ocean-going dry docks are compact diesel generating sets that supply electric power for the pumps, welders, cranes, and all other electric machinery necessary for refitting battle-torn ships. Because they must operate far from friendly shores and supply bases, these many-compartmented docks are self-contained. Placed together, ten of the sections, of the type shown here, will float a battleship. As the sections are joined mechanically they are also tied together electrically. Synchronizing facilities are provided for multiple operation of any number of sections.

General Electric has been responsible for the design and manufacture of electric equipment for almost the entire program. The installation photos here show the compact arrangement of generators, motors, and control—the same type of equipment that construction men have found successful in many projects on land as well as on the sea.

At General Electric your project will receive the same careful consideration. You can count on sound engineering such as went into these floating drydocks—an important factor in *your* favor. *Apparatus Department, General Electric Company, Schenectady 5, N. Y.*

GENERAL ELECTRIC

The Week In Engineering and Construction

ENGINEERING NEWS-RECORD • OCTOBER 11, 1945 • VOLUME 135 • NUMBER 15

# Federal highway money now available to states

## PRA has some funds on hand to match early state requests for funds—Congress obligated by law's terms to provide more money as needed

State highway departments are now free to start using the $500,000,000 of federal aid provided for the first post-war year under the Federal Aid Highway Act of 1944.

Use of the first year's money became possible last week when Congress passed a resolution declaring the war emergency sufficiently relieved for the act to become effective (*ENR* Oct. 4, vol. p. 414).

Actually, the act provides no money. Nevertheless, construction can go forward much as if the measure were an appropriation.

This condition prevails since the Federal Highway Act differs from most congressional legislation in that it is so written that Congress is obligated to provide the federal help as outlined. This latter condition permits the Public Roads Administration to enter into contract obligations with the state highway departments as if the money were actually on hand.

In view of this obligation on the part of Congress, $500,000,000 is now in effect available for the fiscal year ending next June 30. This amount must be matched on a 50-50 basis, and is earmarked as follows: $225,000,000 for the federal-aid highway system; $150,000,000 for secondary roads, and $125,000,000 for federal-aid routes through cities. The aid provided to each state was listed in *ENR* for Jan. 13, vol. p. 88.

Thomas H. MacDonald, Commissioner of Public Roads, recently announced removal of war restrictions on the use of $106,000,000 of federal-aid road funds authorized for previous years, and later frozen because of war conditions. Thus, the total federal aid available to the state highway departments during the remainder of this fiscal year is $606,000,000.

Additionally, the highway act provides $57,750,000 yearly for each of the next three years for construction and maintenance of roads on federal lands. This money is earmarked as follows:

Forest roads, $25,000,000; forest development roads and trails, $12,500,000; national park roads and trails, $4,250,000; national parkways and access roads, $10,000,000, and Indian reservation roads, $6,000,000.

The $500,000,000 for the second post-war year will become available next July 1. If any of the $500,000,000 provided for the first year is unused during that time, the remainder will be carried over into the second year. In like manner, money earmarked for the second year but not requested in that period can be used in the third and last year the act is effective.

When queried if this aid was too great to be used, the PRA revealed that as of July 31, the latest date for which figures are available, state highway departments had plans completed for more than $616,000,000 worth of work. Planning was underway at that time for an additional 2.5 billion dollars of highway construction, while another 1.3 billion dollars has been proposed although no planning for it had started. PRA engineers stress that road reconstruction and widening work can be started with limited planning.

### Plans ready for much work

It was also pointed out that in 1940 the state highway departments undertook $463,000,000 of new construction, using $168,500,000 of federal aid, and that new construction totalled $452,000,000 in 1941, when $157,000,000 of federal money was paid to the states. The departments are now expected to request most of the $500,000,000 of federal assistance to be available during each of the next three years. This view is taken because of the big backlog of work created by the war, plus the fact that much of the federal aid may be used to greater advantage than ever before for construction within cities and for work on secondary roads. More-

(*Continued on p. 2*)

## More states announce highway building plans

Release of federal funds to aid highway construction (*ENR* Oct. 4, vol. p. 414) last week was the signal for moves by more states to get ready their own highway programs. Within the last month, some 32 states have made public their plans for road building that will total about one billion dollars to be spent in the next year.

The six New England states joined the highway march with the announcement that some $50,000,000 will be spent there to recondition older roads and build new ones, with greatest emphasis being placed on roads that will provide easy transit to and through major population centers.

Among New England projects set up for immediate action were:

Continuation of the Merritt Parkway system from its present terminus near New Haven to a point near Hartford; continuation of Massachusetts Route 128 from its northerly terminus in Danvers to Route A-1 in Beverly, and construction of a by-pass for the improved Mohawk Trail around Fitchburg, Mass.

In other sections of the United States, these plans were announced:

Arkansas is assured of financial ability to match a $7,000,000 federal grant, according to J. C. Baker, state highway director. The state has been prepared to implement the program for about two years, Mr. Baker said.

In Georgia, State Highway Engineer George McDonald submitted plans for distribution of $4,310,000 in federal aid, and the same amount from the state treasury, to the various governmental subdivisions for use on highway work. He told the State Highway Board that the state's revenues from gasoline and other taxes will be sufficient to meet the federal funds.

# A.R.B.A. plans no road show for 1946

There will be no road show held in connection with the 1946 annual convention of the American Road Builders Association, due to lack of time to prepare exhibits. Association directors, meeting at Chicago last week, tentatively set convention dates for Jan. 14-17, though they did not designate a convention city. Availability of accommodations will control selection of the place.

Long-range plans are being formulated for a "gigantic" show to be held in February of 1947, however.

Most of the sessions of the executive committees and directors last week were devoted to reports and studies covering phases of road building. These included forecasts by Charles M. Upham, engineer director, indicating high 1946 road outlays (*ENR* Oct. 4, vol. p. 414). Committees represented included those on manufacturers, highway contractors, county highway officials, municipal officials, equipment distributors, and public relations.

Lack of time in which to prepare exhibits was given as the chief reason for not holding a road show at the January meeting. But a great amount of enthusiasm was evidenced for a 1947 exhibit. It may be held in Chicago, depending on accommodations.

One prospective site for the show—which is expected to break all former attendance records—is the Navy Pier, not far from the Loop district. This structure, together with two adjacent buildings, offers some 500,000 sq. ft. of gross floor space which will net about 300,000 sq. ft. of exhibition space. An estimated 60,000 persons are expected to attend the road show.

### Surplus equipment

The executive committee of the manufacturers' division urged that disposal of surplus construction equipment should be accelerated "considerably" as an aid to getting construction under way. Several men closely connected with the manufacturing industry said they feel that the sooner the overall status of the surplus equipment field is determined, the better it will be for the industry. They reported no indication that the quick and orderly disposal of this equipment will have an adverse effect on the industry as a whole.

J. T. Calloway of the Goodyear Tire and Rubber Co. was elected president of the manufacturers' division, to serve out the unexpired term of Paul Cochran, who resigned last June. Staff members of the A. R. B. A. conducting the divisional meetings were: Burton F. Miller, managing director of the highway contractors' division; John Long, managing director of the highway officials' and the municipal officials' divisions; and Norman Gregg, publicity.

## Port authority sells truck terminal bonds

Recently the Port of New York Authority sold at competitive sale $7,500,000 of general reserve terminal bonds to a group of underwriters headed by Harriman Ripley & Co. Inc., at a net interest cost to the authority of 1.9056 percent.

## Federal road funds now available to states

(*Continued from p. 1*)

over, federal aid to the extent of one-third of the cost can be used for purchase of land for right-of-way purposes.

The outlook as to the matching ability of most states is also bright, both the PRA and the American Association of State Highway officials report. In general, most states now have sufficient money on hand or readily available to match the money to be provided by the federal government during the remainder of this fiscal year. A few states, such as Maine, are not so fortunate, their small populations making raising of funds difficult.

One major anticipated handicap to a large volume of highway construction next year is the lack of adequate skilled manpower. This view is taken by Washington groups because of the slow discharge rate, to date, of military personnel previously trained for construction operations. Another closely related problem will be the time needed for discharged personnel to get located on their new jobs.

U. S. Marine Corps Photo

## Engineers use hydraulic crane on tractor mounting

*Navy and Marine Corps engineers working with Austin-Western Co., have developed a full-circle swing hydraulic crane for tractor mounting that has had widespread use in handling loads up to 5,000 lb. The boom is retractable so the unit can pick up a load at 8 ft. from its center, hoist it so that the hook is 18 ft. above the ground, or the boom can be extended to a radius of 16 ft. if necessary.*

*The crane can travel with the load in any position and has been found useful in handling cargo into and out of airplanes, box cars and low-ceiling warehouses.*

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# American Association of Engineers seeks change in labor laws

***Would have better protection for engineers written into proposed new law or Wagner Act amended to meet new conditions***

A campaign to have the National Labor Relations Act amended to give professional men more positive assurance of their right to organize independent of subprofessional men, or to have such assurance written into the proposed Federal Industrial Relations Act (S. 1171) has been begun by the American Association of Engineers.

### Changes in labor law proposed

In December of last year the Board of Directors of the association adopted a resolution calling on Congress to amend the Wagner Act to require the National Labor Relations Board to do two things: (1) Make a detailed classification of all positions in the field of technology and related mechanical arts, crafts, and trades to establish a clear demarkation between "technologists and technicians, i.e. between professional and nonprofessionals"; and (2) Require the board in its determination of appropriate units to permit all technologists (as officially determined by the above classification) to waive or exercise rights of self-organization and designation of representatives, in fully autonomous units, restricted to and controlled by technologists.

### Time for action

When this resolution was adopted, no legislation relating to the Wagner Act was before Congress, but now that the Senate Committee on Education and Labor is to hold hearings on a substitute for the Wagner Act proposed by Senators Ball, Burton and Hatch, (S-1171) the association's officers believe the time has come for action. Therefore, petitions addressed to the Senate committee are being circulated for signature by engineers and other professional men urging the Committee on Education and Labor to recommend inclusion of the requirements set forth in the board's resolution in amendments to S-1171, or to propose such an amendment to the Wagner Act if Congress rejects the substitute for the Wagner Act proposed by Senators Ball, Burton and Hatch.

### Exemption not sought

The A. A. E. officers point that they are not seeking to have engineers exempted from the provisions of the Wagner Act, as has been proposed by other organizations of engineers, but that they seek to have the National Labor Relations Board curbed in the exercise of discretionary powers under which it has assigned professional men to bargaining units made up largely of subprofessionals.

The A.A.E. has been asked to send representatives to the Senate committee hearings, at which time it is hoped to present the petitions now being circulated. Architects, engineers, chemists and other professional men, regardless of their affiliation with the A.A.E., are being asked to sign the petitions now being circulated. Copies may be obtained from Miss M. E. McIver, secretary, A.A.E., 8 South Michigan Ave., Chicago 3, Ill.

## Construction industry reconversion considered

The presidents of 87 national trade and professional associations will meet or send representatives to Washington Nov. 1, to consider the major reconversion problems of the construction industry.

Called by President Eric A. Johnston of the National Chamber of Commerce, after the lifting of WPB Order L-41 (*ENR*, Sept. 27, vol. p. 399) the conference is expected to develop suggestions for insuring a speedy and noninflationary recovery of the industry as an effective step toward unified national recovery.

John C. Stevens, of Portland, Ore., president of the American Society of Civil Engineers, has accepted the chairmanship of the new council, to be known as the Construction Industry Advisory Council.

# Labor cost, materials balk road work

The New York State Department of Public Works last week attributed its failure to receive bids on five of six advertised highway construction jobs to the factor of uncertainty in material supply, labor rates and demands for new working conditions.

The state had advertised for bids on six projects, involving construction and reconstruction of highways and bridges in widely scattered sections, at a total estimated cost of $2,475,404. Of the six projects, only one attracted a bid low enough to be acceptable. This was a bid of $358,561, submitted by the Horn Construction Co. of New York City, for the elimination of three grade crossings in the Village of Farmingdale, Nassau County.

On one other job, reconstruction of 9.4 miles of Route 9K in Warren County, one bid was submitted, but since it was more than the engineer's estimate, it was rejected. No other bids were submitted on the remaining jobs.

State engineers said that a continuing trend toward a refusal to bid on such jobs has become apparent during the last several weeks.

### Contractors say bids justified

Indicating a similar opinion among contractors in other sections of the country, members of the Allied Construction Industries of Cincinnati, Ohio, wrote City Manager W. R. Kellogg that bids which run higher than estimates by the city engineer are justified.

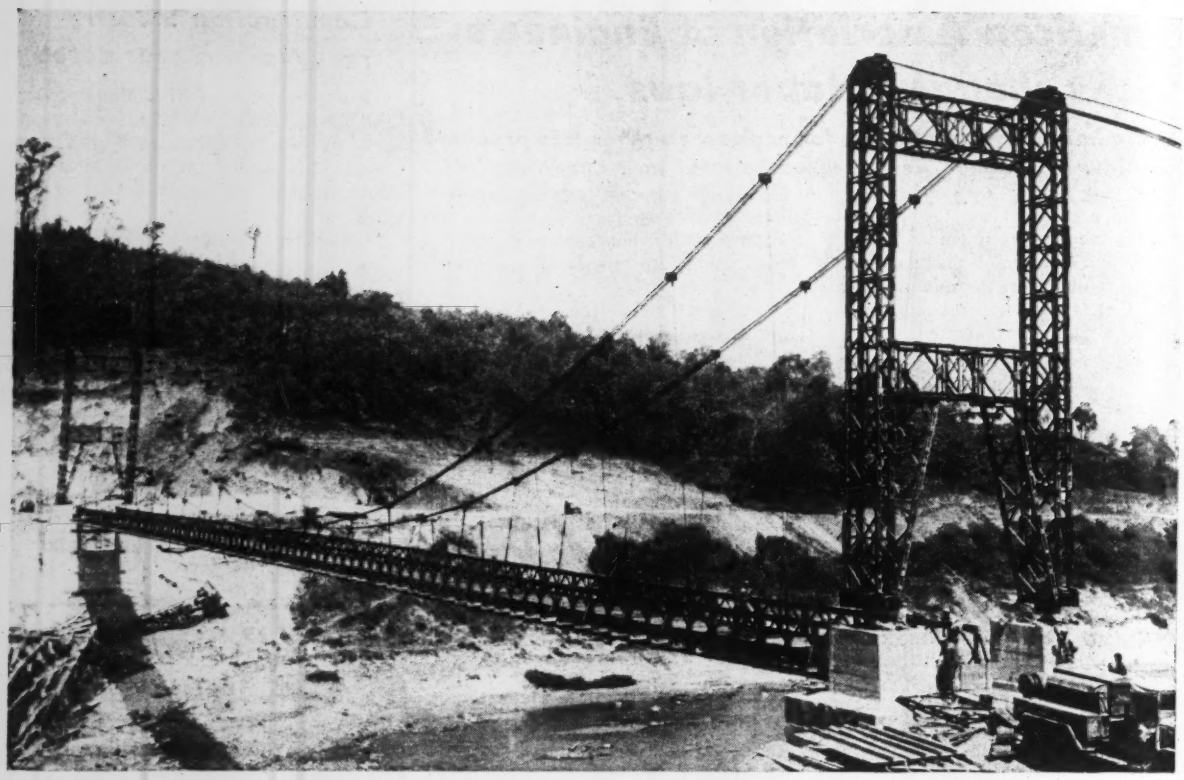
A. C. Armstrong, acting manager of the Allied Construction Industries, said that contractors believe that the engineers' estimates have not kept pace with increased cost of construction since the start of the war. He pointed out that general construction costs have risen "at least 40 percent" since 1940, and labor rates have gone up "about 20 percent." Advances in machinery prices and maintenance costs and other factors were cited.

Contractors who recently received contracts for construction of road projects in excess of $1,000,000 in Virginia have complained to James A. Anderson, State Highway Commissioner, that there is a definite labor shortage in the State. Mr. Anderson estimated that 15,000 men will be needed for Virginia highway work now getting under way.

It was pointed out that common labor pay on highway work in the State is 45 cents an hour, less than half the wage of $1 an hour being asked by many applicants.

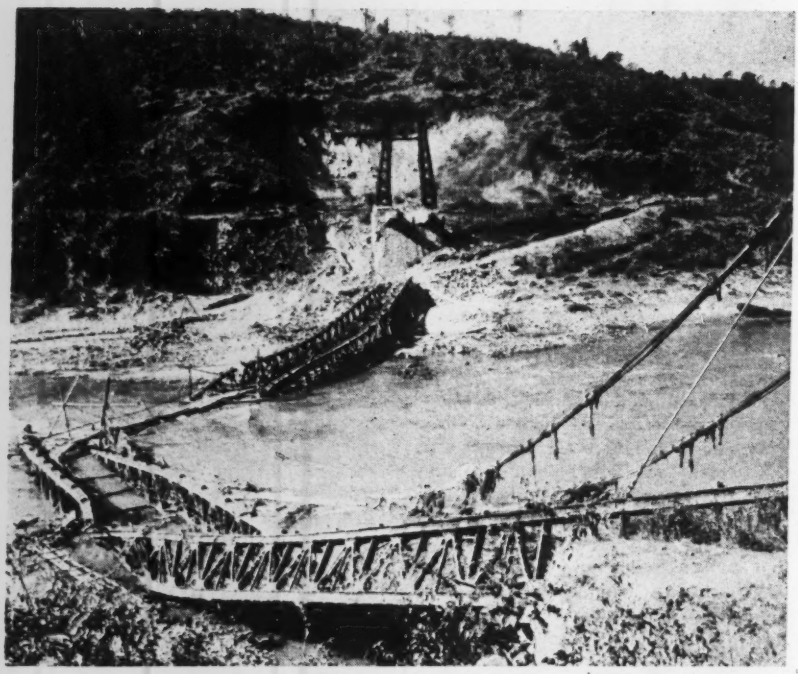
Charles M. Ziegler, Michigan highway commissioner, said that high building costs and difficulty of obtaining labor may slow the start of the state's construction program scheduled to start during the fall and winter. Mr. Ziegler said that, in view of the situation, the state would take bids for some grading and bridge jobs, and "see what happens." "If things work out well, other jobs will be let, and the balance of the first year's program will be advertised for bids in the spring," he added.

At Frankfort, Ky., Highway Commissioner J. S. Watkins said that equipment is "desperately needed" to help his department get through its program. The department needs about 300 trucks immediately, he said.



*This 420-ft. Bailey bridge carries the Stilwell Highway across the Shweli River near the China-Burma border.*

# Long Bailey Bridge Spans Shweli River



What is said to be the longest single-span military bridge in existence was built by U. S. Army Engineers across the Shweli River on the Stilwell Highway near the China-Burma border. A suspension structure without side spans, its main span is 420 ft. long, of 40-ton capacity, and is assembled entirely of 5x10-ft. Bailey bridge panels plus such special parts as tower bases and saddles, cables, suspenders and fittings. From the standard "kit" an Engineer company can build bridges of any span from 220 to 420 ft. in 20-ft. increments. To secure the 40-ton capacity on the Shweli River bridge, reinforcing chords (also standard parts) were added top and bottom to the stiffening trusses.

Other characteristics of the standard Bailey suspension bridge are that it utilizes six 0.83-in. dia. prestressed wire ropes set side by side for each cable;

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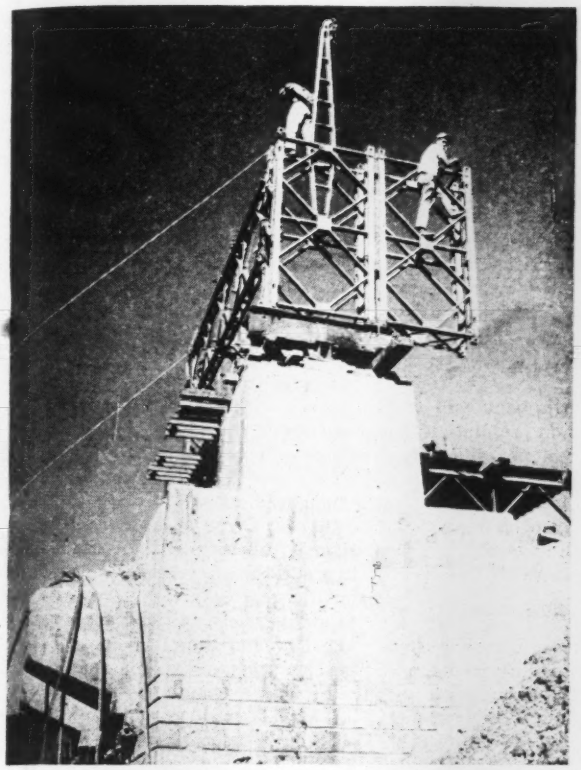
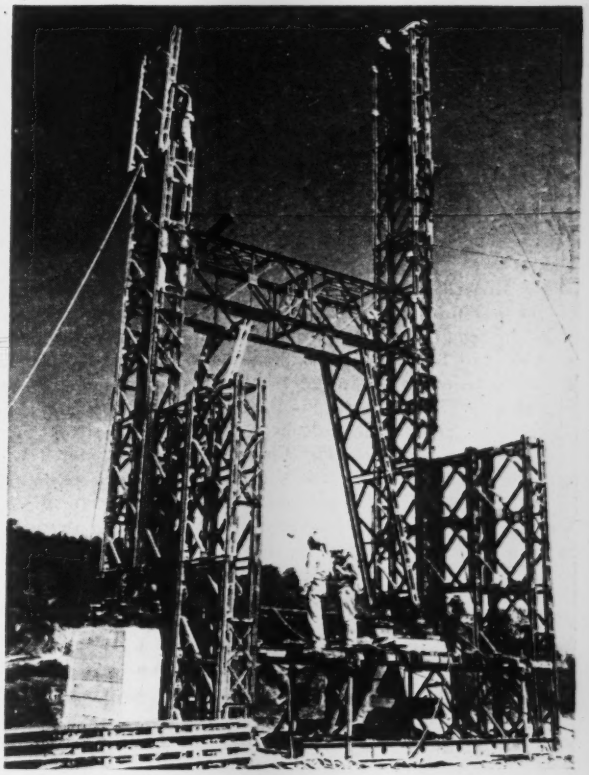
***Wreckage of the original Shweli River suspension bridge after an American bomber had scored a direct hit.***



*Construction on the bridge is begun as erection forces place first Bailey panel for one of the towers. The panel at right is first of several that will be temporarily used to form a wider base for stability during erection.*

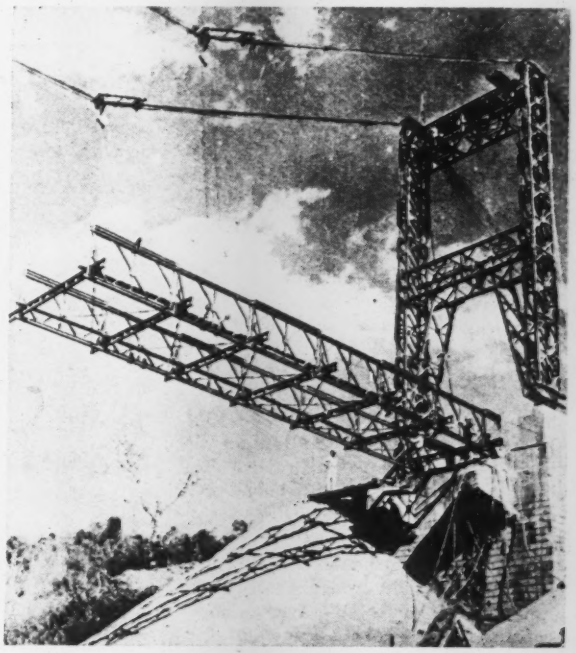


*Engineer soldiers perch atop both legs of tower to attach double Bailey panels hauled up by winch. Note here, also, the temporary use of Bailey panels to widen the legs and thus give the tower stability until the cables can be strung.*

that 0.83-in. wire rope suspenders are used at 20-ft. spacing; that the towers, 55 ft. high on the Shweli bridge, are of rocker type; that the cables are clamped in the saddles so that there is no relative movement with the towers; that the stiffening girders are not connected to the towers, in fact, stop 10 ft. short of them; and that anchorages are usually buried Bailey panels to which each of the wire ropes is connected through a detail involving a special quick-acting clamp or grab. This method of attachment avoids cutting of the cables, and permits easy adjustment of any errors made in cable length.

With respect to the bridge structure of deck and stiffening trusses, special sliding bearings are used which allow longitudinal movement but provide lateral constraint and prevent uplift. Suspenders bolt to the top chords of the trusses and to cable clamps that hold the six ropes of each cable in the same side-by-side position they occupy in the saddles.

The accompanying pictures give some idea of the erection methods employed, although it should be pointed out that half of the bridge is assembled complete on each bank and manually rolled through the towers to the center of the span, the ends being supported by tackle from carriages on the cables. The suspenders are all attached at the center of the span, where the cables come down close to the deck, and then are slid up the cables to their proper positions.



*With the towers in place and cables strung, Bailey bridge of half-span length, assembled on the bank, is pushed out while its outer end is supported from the cables. Suspenders were added after two halves of bridge meet at the center.*

## To resume building Chicago River bridge

***State Street structure work due to start in April—Piers installed in 1941, but other work was halted by war***

After nearly four years of delay due to the war, construction will be resumed next spring on the North State Street Bridge over the Chicago River in Chicago, Ill., Oscar E. Hewitt, Commissioner of Public Works, said last week.

When completed, the new bridge will provide two 36-ft. roadways separated by a 5-ft. center island, and two 11-ft. sidewalks. The structure will be a double-leaf trunnion bascule bridge, of the Chicago type, containing three lines of trusses (rail-height type), with a clear span of 210 ft. between piers. Overall width of the superstructure will be 108 ft. Field erection of the span is expected to start by April.

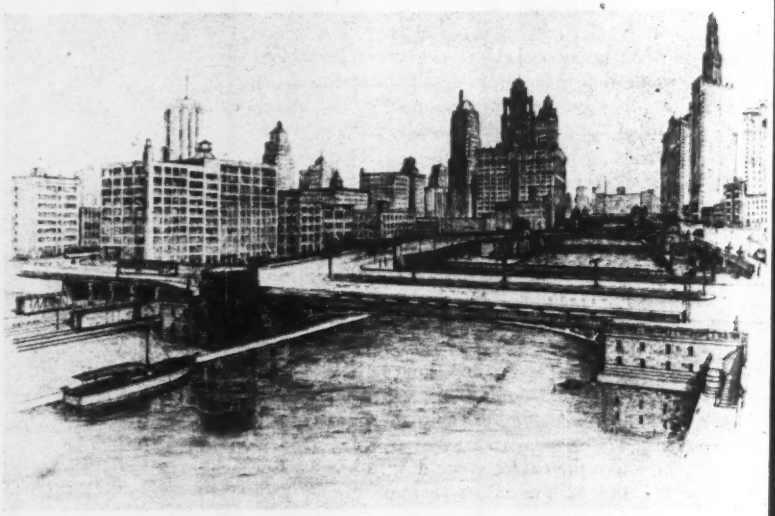
Other features of the improvement include 210 lin. ft. of concrete-decked approach viaduct, supported on steel bents and girders on the north side of the river and connecting with about 200 lin. ft. of earth-filled approach ramp that will intersect street grade at Kinzie St.; a one-block concrete and structural steel viaduct, paralleling the north bank of the river to connect the present Wabash Avenue viaduct with a new approach viaduct on North State Street.

#### Bids received next year

Designs and specifications for both the approach and connecting viaducts are being prepared by Stephen J. Michuda, city bridge engineer, and bids are expected early next year. The estimated cost of the entire project is $2,200,000. Funds have been provided by a city bond issue.

The north approach viaduct, crossing several railroad tracks, is tentatively planned with an overall width of 115 ft.—pending acquisition of right-of-way. The connecting viaduct will have a curb-to-curb width of 85 ft. where it joins the Wabash Ave. viaduct, and will be flared out to 130-ft. at its junction with the new North State St. approach. It will have 16-ft. and 12-ft. sidewalks. The connecting viaduct will carry street railway traffic from Wabash Ave. in the Loop district to present lines on North State Street.

Chicago has been without a river crossing on this street since 1939, when the old rolling lift bridge was removed to make way for the subway then under construction. The two concrete piers for the new bridge, straddling the subway tubes, were completed up to a point above river level by Fitz Simmons & Connell Dredge & Dock Co., Chicago, at a cost of $491,000 (*ENR* May 15, 1941, vol. p. 781). Earlier in 1941 a $1,277,000 contract for the bascule superstructure and operating equipment was awarded to the Overland Construction Co., and an $85,500 contract for electrical work to the Fries-Walters Co., both of Chicago. Work was suspended when the war started.



*The story of Chicago's efforts to maintain an adequate crossing over the Chicago River on North State St. is reflected in the drawing above showing the eventual appearance of the newest structure, which will be the fifth at this location in 80 years.*

## President Truman asks action on St. Lawrence

President Truman on Oct. 3 asked Congress for early action on development of the international section of the St. Lawrence River for power and navigation under the agreement with Canada that was drawn up in 1941 (*ENR* May 22, 1941, vol. p. 823), which agreement was never completed. On the preceding day, a joint resolution had been introduced into both houses of Congress to formalize the action asked for by the President.

Also in Congress are two bills calling for early start in the work (*ENR* Oct. 4, vol. p. 448) so that Congress now has before it the joint resolution and the two bills. Hearings on the project are expected to begin soon in view of the President's desire for early action.

Proponents of the project hold that approval of the joint resolution by a majority of both houses, which now appears probable, will give the force of law to the 1941 agreement, thus avoiding the necessity of a treaty with Canada, which would require a two-thirds vote of the Senate.

#### Power for New York

In reply to a request from Governor Dewey of New York for assurance that New York would be permitted to acquire the power plants, President Truman said: "I continue to be enthusiastically in favor not only of the development of the St. Lawrence waterway but also of the water power on the river. I also continue to believe very strongly that the necessary power facilities should be built by the federal government and turned over to the appropriate New York State agency in accordance with the agreement recommended by the Corps of Engineers of the U. S. Army and the Power Authority of the State of New York dated Feb. 7, 1933. This was the program of President Roosevelt, and I have always been in favor of it."

In reply to an inquiry from *Engineering News-Record* as to how soon the work could start, Maj. Gen. Thomas M. Robins, Deputy Chief of Engineers and a member of the St. Lawrence Advisory Committee stated:

"If the Corps of Engineers were assigned this work and given the necessary authority to proceed, we could start immediately on preliminary work, such as access roads, railroad access and relocation and other necessary initial developments and we could call for bids on certain elements of the project.

"Actual construction work on the project proper could be launched shortly thereafter and we could profitably spend about twenty million dollars during the first year. This is made possible through the previous allocation of emergency funds for preparation of preliminary plans and specifications."

Funds for construction would have to be appropriated by Congress.

## Plan $100 million Alaska construction work

Returning from a 4,700-mi. inspection tour of Alaska, made in conjunction with the planning of a $100,000,000 postwar construction program, Brig. Gen. Philip G. Bruton of San Francisco indicated recently that the territory sorely needs better inland transport facilities.

While General Bruton, Pacific Division Engineer for the Corps of Engineers, made no direct statement as to the inadequacy of the facilities, he said he believed that the entire territory's future development depends largely upon improved inland transportation feeding through "well developed harbors."

Accompanied on the airplane trip by Col. Conrad P. Hardy, Seattle district engineer, General Bruton covered installations at Anette Island, Juneau, Excursion Inlet, Anchorage, Nome, Pt. Spencer and Fairbanks.

"The immense size of the Territory of Alaska and the vast distances between settlements, coupled with the inaccessibility of most of the area, means that inland transportation must be developed to lead to suitable harbors before natural resources can be developed thoroughly," he said.

"Development of mineral resources, probably the key to Alaska's future, demands these improvements. The fishing industry, of major importance to Alaska as well as the states, also means that improvement of small craft harbors is essential," he said.

The Seattle District U. S. E. D. has 12 harbor improvement projects in Alaska which have been approved by Congress and will be ready for construction immediately upon appropriation of funds for the $4,000,000 developments.

Seattle Army Engineers also have three harbor surveys in progress at Skagway, Neva and Olga Straits. Others will be started soon at Anchorage, Cook Inlet, Kodiak, Cordova, Upper Kvichak River and Valdez Harbor.

Commenting on Excursion Inlet dismantling, General Bruton said that 85 percent of the usable material will be saved.

## Public utilities manager named at San Francisco

James H. Turner, chief engineer of the San Francisco Public Utilities Commission, has become manager of public utilities, succeeding E. G. Cahill who will resign Nov. 15.

To take the post, Mr. Turner resigned as manager and chief engineer of the Hetch Hetchy Water and Power Bureau, although his new post includes supervision over the Hetch Hetchy system, the railway system and the city airport.

### MAJOR FLOOD CONTROL PROJECTS READY FOR WORK

| | |
|---|---|
| Garrison reservoir, North Dakota | $130,000,000 |
| Bull Shoals reservoir, Arkansas | 47,000,000 |
| Wolfs Creek reservoir, Kentucky | 44,394,900 |
| Clark Hill reservoir, Georgia and South Carolina | 35,300,000 |
| Harlan County reservoir, Nebraska | 31,000,000 |
| Iron Canyon reservoir, California | 30,360,000 |
| Leland reservoir, Virginia and North Carolina | 30,900,000 |
| Osceola reservoir, Missouri | 28,500,000 |
| Detroit reservoir, Oregon | 27,650,000 |
| Conemaugh River reservoir, Pennsylvania | 21,366,000 |
| Kings River and Tulare Lake Basin; Pine Flat reservoir, California | 19,500,000 |
| Fort Gibson reservoir, Oklahoma | 19,007,000 |
| Markham Prairie reservoir, Oklahoma | 19,295,000 |
| Folsom reservoir, California | 18,474,000 |
| Center Hill reservoir, Tennessee | 16,982,600 |
| Bluestone reservoir, West Virginia | 16,126,900 |
| Whittier Narrows reservoir, California | 16,983,000 |
| Allatoona reservoir, Georgia | 16,335,000 |
| Buffalo Bayou, Texas | 15,812,900 |
| Kansas City, Missouri and Kansas City, Kansas | 14,682,900 |
| Cherry Creek reservoir, Colorado | 13,940,000 |
| Chattanooga, Tennessee and Rossville, Georgia | 13,500,000 |
| Canton Reservoir, Oklahoma | 11,248,000 |
| Blakely Mountain reservoir, Arkansas | 11,080,000 |
| Los Angeles River, California | 9,529,400 |
| Fall River reservoir, Kansas | 9,465,000 |
| Dillon reservoir, Ohio | 8,340,000 |

## Engineers list billion in flood, rivers work

***Flood control and rivers and harbors work can start at once—Huge additional totals ready by 1946.***

The Corps of Engineers last week made public a long list of projects, totaling an estimated $900,615,500, on which its civil works divisions are ready to start immediate action. By late spring of 1946, additional projects, estimated to cost $593,954,965, can be activated.

All of the projects—in rivers and harbors and flood control fields—have been authorized by Congress, and work can begin when necessary funds are appropriated. Flood control accounts for $833,538,200, and rivers and harbors work will require $67,077,300. Projects that can be ready in the late spring include flood control amounting to an additional $143,383,000, and rivers and harbors work that was totalled at $450,571,165.

Of the projects ready for action this fall, many have had some work done on them, and figures quoted by the engineers are amounts estimated necessary for completion. Major projects listed as ready for construction in the fall of 1945 include those shown in the accompanying table.

#### Rivers and harbors work

Work listed for 1946 start included Lookout Point reservoir, Oregon, $24,029,000; Whitney reservoir, Texas, $20,000,000; Sutton reservoir, West Virginia, $12,676,000.

Rivers and harbors projects ready for construction in the fall of 1945 include:

Mississippi River between the Missouri River and Minneapolis, Minn., $22,290,100; Los Angeles and Long Beach harbors, California, $7,000,000; Great Lakes to Hudson River waterway, $7,025,000; Delaware River, Philadelphia to the sea, $5,159,700.

Additional projects that can be initiated by late spring of 1946 include: work on the Alabama and Coosa rivers in Alabama and Georgia, $79,780,000; work on the Neches and Angelina rivers, Texas, $27,750,000; river lock and dam construction, $20,230,500; Illinois waterway, $26,723,700; Snake River in Oregon, Washington and Idaho, $58,288,000; Columbia River, Oregon and Washington and Umatilla (McNary) Dam, $49,090,000; Trinity River and its tributaries, Texas, $18,433,800; Intracoastal waterway, Florida, $11,421,300; New York and New Jersey channels, $14,052,000.

# Ohio River pollution abatement closer

Agreement on a plan to construct a $17,500,000 sewage disposal system for Hamilton County, Ohio, and the action of Louisville, Ky., in making application for federal aid in the design of a $7 million treatment plant highlight recent developments looking toward pollution abatement in the Ohio River. Details of these and related activities in the sanitary engineering field this week are as follows:

Representatives of Hamilton County governmental subdivisions have agreed to construct and operate a comprehensive sewage disposal system, and a committee is now drawing up the contract under which the governmental units within the county will share in the costs. Members of the committee include H. H. Kranz, Cincinnati city engineer, and Houston Coates, county engineer.

Tentative agreement was reached by 27 representatives of city, county and village administrations in Hamilton County to finance construction through the collection of sewer service rents from property owners. The service charge will be based on water usage and will be made large enough to amortize the construction bonds over a seven-year period. It is believed that the service charge will amount to between 50 and 60 percent of current water bills.

### Louisville seeking funds

At Louisville, Ky., City Engineer James B. Wilson has made application for a $170,000 loan from the Federal Works Agency, to undertake the preparation of a sewage treatment plant. The plant is estimated to cost $7 million. Some 18 months will be required to complete the design.

Meantime at Madison, Ind., Mayor O. L. Head is planning to ask the state Attorney General if the Indiana Stream Pollution Board can enforce its recent order that the city cease pollution of the Ohio River by Nov. 1. Mayor Head declared he favored construction of remedial works, but that the cost was prohibitive at this time. In seeking relief from the state order, he pointed out that the sewage flow from Madison constituted only a small portion of the pollution that is now pouring into the river from many other places.

At Akron, Ohio, the City Council has approved an expenditure of $150,000 for the construction of sludge incinerator facilities. This work is part of the city's ultimate $5 million expansion of sewage treatment facilities, according to Service Director M. L. Davis. The appropriation was made from water department funds, under provisions of a state legislative bill passed specially to meet the needs of Akron.

Binghamton, N. Y., which is under orders from the state department of health to construct a sewage treatment plant, has retained the consulting firm of Parsons, Brinckerhoff, Hogan and Macdonald of New York to prepare plans. Gale Dixon of that firm is working on this $1,500,000 project with City Engineer John A. Giles. Plans made in 1929 are under study.

### Nationwide activity

An overall picture of progress in advance planning of sewage disposal works is revealed in the Construction Trends section (p. 1) of the October 4 issue of *Engineering News-Record*. Here is shown that proposed work now totals $1.3 billion, which is the equivalent of $9.98 per capita.

What is more important, however, is the fact that 88 percent of the proposed work ($1.1 billion) is now in the planning stage. Work ready to go into construction following acceptance of bids totals $75.4 million.

## General Larkin heads Second Service Command

After more than three years in top Engineer jobs in the Mediterranean and European theaters of war, Maj. Gen. Thomas B. Larkin, of Fort Peck and Panama Third Locks fame, was welcomed home this week by appointment as Commanding General, Second Service Command, with headquarters at Governor's Island, New York City. General Larkin replaces Maj. Gen. Thomas A. Terry, a coast artillery officer, who took over the command of U. S. forces in the India-Burma Theater—a post made vacant, interestingly enough, when Maj. Gen. Raymond A. Wheeler was named Chief of Engineers.

General Larkin went to England early in 1942 as chief of staff, S.O.S., and then became commander of the Mediterranean Base Section, where he did much of the planning and most of the execution in supplying our North African invasion. Subsequently made commanding general, S.O.S., in the Mediterranean Theater, he handled the Sicilian, Italian and finally the South France invasions. Upon entering the European Theater he was made deputy commander of the S.O.S. there, under Lt. Gen. John C. H. Lee.

Press Assn. photo

## British experimental floating airstrip

*Hexagonal cans, 6 ft. across and 30 in. deep, bolted together and surfaced with canvas, made up a floating airstrip that the British tried out during the war. Shown under construction here, it was built to a length of 520 ft. and a width of 60 ft., and was successfully used by airplanes, it is reported. The claim is also made that the surface remained level even in a rough sea.*

*Somewhat similar experiments were carried out by the U. S. Navy here in the United States, using an assembly of the famous Seabee pontoon units, the 5x5x7-ft. steel boxes. This floating airstrip was on a larger scale than the British type, unconfirmed reports giving the dimensions as 100 ft. wide and 3,600 ft. long. It, too, was successfully used for aircraft landings and takeoffs, but so far as can be learned, neither it nor the British type was ever used operationally. Our own tremendous aircraft carrier building program is rather good evidence that the United States discarded the idea of floating airfields early in the war.*

## General Reybold joins Delaware road bureau

Lieut. Gen. Eugene Reybold, who retired Oct. 1 as Chief of Engineers, (*ENR* Sept. 13 vol. p. 337) U. S. Army, plans to join the Delaware State Highway Department. In his new work, to start Nov. 1, he will head a Delaware River Crossing Division of the department.

This division was created in September in preparation for proposed construction of a crossing of the Delaware River south of Wilmington, as authorized by the 1945 session of the state legislature. General Reybold, a native of Delaware and a graduate of Delaware College, plans to have offices in both Wilmington and Washington, D. C.

The feasibility of constructing a bridge across the river has already received considerable study, as has construction of a tunnel. A report on the two proposals was made under the direction of W. W. Mack, chief engineer of the department, to the Delaware state legislature in 1941. This report incorporated studies by Coverdale & Colpitts on traffic estimates, a study by Waddell & Hardesty as to the most satisfactory type of bridge, and recommendations by Ole Singstad regarding the best type of tunnel.

The state legislature has authorized a $25,000,000 bond issue to construct the type of crossing chosen. However, much remains to be done before the construction can start.

Although the Delaware boundary along the Delaware River is the high-water mark on the New Jersey side of the stream, that state must approve the project decided upon. It will also be necessary for the War Department to approve the work.

### Schley heads Baltimore work

Maj. Gen. Julian L. Schley, who preceded Gen. Reybold as Chief of Engineers, has been appointed executive director of the Baltimore, Md., Aviation Commission, and as such will direct a $10,000,000 airport improvement program at that city.

City voters last fall approved an initial $3,000,000 bond issue to finance first stages of the airport development that will include construction of runways, an administration building and other facilities, as well as acquisition of land for a new airport in Anne Arundel County, where the port will be located.

The firm of J. E. Greiner Co., Baltimore, has been retained as consulting engineers on the project. Pending completion of the new field, the city will continue using Dundalk field.

# FROM AN EDITOR'S NOTEBOOK

**Col. H. B. Gotaas,** whose appointment as president of the Institute of Inter-American Affairs has just been announced, occupies a unique post in the field of international public health work. And the rise of this 39-year-old civil engineer to his present position in rank and responsibility belies the oft-repeated assertion that the technically-trained man finds little opportunity to exercise his talents in administrative work.

**As chief** executive of the institute, which is the corporate agency of the Office of Inter-American Affairs, engaged in cooperative health, sanitation and nutrition programs with eighteen Latin-American countries, Colonel Gotaas takes over the supervision of a large group of engineers, doctors, nurses, field technicians and other personnel.

Such a job was farthest from his thoughts when, in the summer of 1942, he took leave from professorial duties at the University of North Carolina Graduate School of Public Health, intending to join the Navy.

H. B. Gotaas

**Following his arrival** in Washington, he was asked to meet with Maj. Gen. George C. Dunham. The latter, a Regular Army medical doctor who had long been engaged in public health work in the Philippines and other tropical countries, had been given the assignment to implement the recommendation made at the Rio de Janerio conference of foreign ministers that during the war emergency special efforts be made to improve health standards in the western hemisphere.

**General Dunham needed** a chief engineer, and acting on the advice of Prof. Gordon Fair of Harvard, he talked with Ben Gotaas. Enthused over the possibility of participating in this new international public health venture, Gotaas accepted a captain's commission in the Army Sanitary Corps, with assignment to the health and sanitation division of the Office of the Coordinator of Inter-American Affairs.

**The division,** whose personnel included medical men as well as engineers, expanded its activity rapidly. Chief Engineer Gotaas' responsibilities increased, too, and within 18 months he was acting as assistant director of the division, following which he became director. Shortly thereafter he was given added duties as vice-president of the institute, of which the division of health and sanitation forms part. Meantime, he received consistent advances in rank to reach the status of colonel last January.

**Election** of Colonel Gotaas to the presidency of the institute a few weeks ago followed General Dunham's resignation, which was due to his inability to stand the physical strain of supervisory work that required him to fly an average of 100,000 miles a year.

**Colonel Gotaas** thus steps into a post that calls for plenty of physical stamina as well as administrative skill and diplomacy. Not only is his organization distributed throughout Central and South America where it is engaged in completing the construction of hospitals, water and sewerage installations, malaria control works and other projects relating to various phases of health and nutrition, but he must likewise concern himself with a host of problems involving the national aspirations and sensibilities of 18 different countries. Not the least of these is the eventual termination of projects whose *raison d'etre* was based on war-created situations that no longer exist.

**Added to this** is the equally challenging situation created by the need of coordinating the activities of both doctors and engineers. Viewpoints of these two professional groups must be kept in harmony and directed toward common objectives.

**But if past performance** is any criterion, this one-time city engineer of Vermillion, S. D., and former college professor, will discharge his new responsibilities with tact and vigor. And quite possibly he may be able to promote policies leading to closer peacetime relations with our Latin-American neighbors.—*E.J.C.*

# MEN AND JOBS

**C. J. Chaffins,** named to succeed the late James Mutch as acting Spokane County engineer at Spokane, Wash., has been appointed county engineer.

**J. T. Lay,** Jefferson County engineer at Port Townsend, Wash., has agreed to fill the additional post of part-time city engineer of that city, which has been without a city engineer since **William A. Bugge** resigned to accept a position with a private firm at Portland, Ore.

**George G. Brissette,** a graduate of the University of Michigan engineering college and an employee for 11 years in the Michigan State Highway Department, has been appointed city engineer of Menominee, Mich.

**J. Henry Valiquette,** city engineer of Grand Mere, Que., has been appointed city manager of Three Rivers, Que.

**Frank Charlesworth,** who has been city engineer of Kaukauna, Wis., on a part time basis for the past 25 years, will now be full-time city engineer. He has been granted permission to work one day a week for the city of DePere.

**Gordon Maynard** has been appointed district engineer for the Portland Cement Association, Richmond, Va., to succeed James Dunn.

**Lieut. Col. Nathaniel P. Turner,** Houston, Tex., has been promoted from major, it was announced recently by Maj. General H. S. Aurand, commanding general, Services of Supply, China Theater. Col. Turner attended Texas A & M College and Cornell University, and formerly was a consulting engineer in Houston. On duty with Headquarters, Services of Supply, China Theater, Col. Turner is chief of the general engineering division, with supervision over all construction and engineering projects.

**Clinton Henning,** former city engineer of Lodi, Calif., who left his position in April, 1943, has been reappointed to it. Since 1943 he has been employed at Pasco, Wash., with the Corps of Engineers. He served as Lodi city engineer first in 1937, when he was also superintendent of streets. From 1929 to 1937 he was assistant city engineer.

**Henry W. Buck,** member of the engineering firm of Buck & Buck, Hartford, Conn., and **Benjamin H. Palmer,** Norwich, civil engineer, have been appointed members of the State Board for the Supervision of Dams and Reservoirs by Governor Raymond E. Baldwin of Connecticut. **James A. Newlands,** Hartford, has been appointed to the State Board of Registration of Professional Engineers and Land Surveyors until July 1, 1949.

**Edmund S. Spencer,** principal assistant civil engineer, Department of Public Works, St. Paul, Minn., has retired after 36 years of service. He had supervised the design of street improvements, sewers and miscellaneous construction for the department during that time.

District Conservationist Dorsey M. Barnes has announced that **Albert Chan,** a Chinese exchange engineer, has been assigned to the Phelps-Gosper soil conservation district, of Holdrege, Neb. Mr. Chan is a graduate of the University of California school of engineering and is a specialist in cartography and drainage.

**Ed Kimmler,** 70, dean of Summit County, Ohio, engineers, retired recently. He had resigned twice before, but was recalled both times.

**Alonzo Curtis,** city engineer of Anchorage, Alaska, for many years, has resigned. He will be succeeded by **H. M. Reherd,** acting city engineer.

The Bureau of Reclamation has closed its offices at the Minidoka relocation center near Hunt, Idaho, and transferred **W. E. Wheeler,** resident engineer, to the Hungry Horse Dam project in Montana.

**Lieut. Col. F. P. Brock,** formerly material engineer, district 9, Illinois Division of Highways, is now in Okinawa. He has been with the Army Engineers in Alaska and the Aleutians.

**James A. Davis,** assistant highway director for the state of Washington, became acting director of the department on the death recently of Director Clarence Hickey.

**Capt. Robert E. Burns,** St. Louis, Mo., engineering and operations officer of the United States Army Engineer aviation battalion in England, has been advanced to major.

**R. W. Thomas** of Winnipeg, Man., has been named city engineer of Portage La Prairie, succeeding **T. H. Porter,** retired. Mr. Thomas has recently been in charge of construction for No. 2 Air Command, R.C.A.F.

**William W. Mathews,** superintendent of the Gary, Ind., sanitary district, was named winner of the annual award for meritorious service in the sewage works field, announced recently by the Indiana Sewage Works Assn.

**Frank H. Brazie,** Valley City, N. D., has been appointed construction engineer for the state highway department of North Dakota to succeed **N. W. Hicks,** construction engineer since 1938, who recently resigned.

**C. R. Patterson,** Litchfield, Minn., county highway engineer for Meeker County for many years, has resigned.

**Comdr. Harold W. Baker,** USNR, former city manager of Rochester, N. Y., will return to Eastman Kodak Co., as safety chief when he completes his Navy duties. He began his war service Feb. 1, 1941, with the Navy's Civil Engineer Corps in Washington, with a corps of

*E. C. CHANEY, assistant district engineer, District 4; M. C. VOLKER, resident engineer in Baltimore County and JOHN FOERTSCH, superintendent of equipment. They've met to discuss their jobs with the Maryland State Roads Commission.*

12 officers under his direction, and he has since continued in that capacity. Comdr. Baker, who was graduated in civil engineering at Union College, was connected with the Rochester Bureau of Municipal Research when he was named Public Works Commissioner. After a number of years he was advanced to city manager.

**A. C. Tilley,** Nebraska state engineer from 1935 to 1941, has been appointed chief engineer of the Central Nebraska Public Power & Irrigation district, and took over his duties recently.

**Capt. Carl F. Botsford,** who was the head of the Engineering Department of the Nebraska State Board of Control at Lincoln, and is now in Italy, will resume his former duties soon. The War Department has approved his release.

The appointment of **Guido Moss** as engineer in the St. Louis, Mo., Department of Public Utilities has been announced by **H. C. Brockhoff,** director.

**Sherman P. Duckel,** assistant San Francisco city engineer, was named "Acting City Engineer" Sept. 4 on account of the expected resignation of John J. Casey.

**1st Lieut. Joseph S. Malek** of the Corps of Engineers, U. S. Army, has been awarded a Bronze Star Medal for meritorius service as officer in charge of the photomapping section of the 654th Engineer Topographic Battalion in England, France and Belgium. Prior to entering the service Lieut. Malek had been assistant structural engineer in the U. S. Engineer office at Providence, R. I.

**J. D. McKenzie,** Nova Scotia's Minister of Highways and Public Works for the last 5 years, has resigned.

**Bernard G. Kesting** has resigned as Lucas County, Ohio, engineer to become engineer with Comte Construction Co., Toledo, commercial and industrial builders. **Melvin H. Rice,** chief deputy engineer, is appointed to fill the post until November, 1946, when voters will elect an engineer to complete the term, which expires in 1948.

**Col. Richard Wyman Pearson,** formerly deputy engineer of the 12th Army Group, is now assigned to the General Board U. S. Forces European Theater. The board, composed of members representing all arms and services, will study strategy, tactics, technique, equipment and organization of African and European campaigns with a view to reporting on results and recommending improvements.

*Only civilian engineer ever to receive the Army's Bronze Star Medal, GAIL A. HATHAWAY (left) smiles as MAJ. GEN. T. M. ROBINS, deputy chief of engineers, pins on the award. The medal was awarded for Mr. Hathaway's work to make possible rapid Allied crossings of the Rhine for deeper penetration into Germany. COL. E. R. NEEDLES (center) who received the Legion of Merit for his part in the same job, looks on.*

**Leslie N. Boney, Jr.,** of Wilmington, N. C., has been promoted to major with the Engineer Construction Command in Manila, P. I., where he is assigned to the Field Operations Division. A graduate of North Carolina State College Engineering School in 1940, he entered the Army in November, 1944.

**Philip B. Streander** has reopened offices as a consulting sanitary engineer at 46 Cornhill, Boston 8, Mass. In his new practice he is affiliated with Damon & Foster, consulting civil engineers of Sharon Hill, Pa., and Cleverdon, Varney & Pike, consulting structural engineers of Boston. Mr. Streander will specialize in the fields of water supply, sewerage and refuse disposal.

**William H. Stuart,** Halifax, N. S., recently appointed deputy minister of highways and public works for Nova Scotia, formerly was a construction engineer specializing in hotels.

*Well into his second hitch as head of the Montana State Highway Department is H. W. HOLMES, chief engineer.*

**Lt. Col. Frederick A. Muhlenberg,** U. S. district engineer at Cincinnati, Ohio, retired recently and probably will go into private practice as an engineer in Pennsylvania. His successor is **Col. Paschal N. Strong,** a 1922 West Point graduate who was overseas for 18 months.

**Capt. Roy A. Krows** and **Capt. James Gibbs** are civil engineers recently added to the supply section of the Seattle, Wash., District, U. S. Army Engineers. Capt. Krows is chief of the transportation branch, while Capt. Gibbs fills the same post for the coordination section. Both had overseas duty, Capt. Gibbs in the European theater and Capt. Krows in the China-Burma-India-theater where he served on Army Engineer construction of the Ledo Road.

**Maj. Carl B. Wirching** has resumed his post on the Los Angeles Board of Public Works after spending three years on leave in the Army. **Capt. Clarence J. Derrick,** appointed by the mayor to fill the vacancy, may be retained as an advisor for Los Angeles' new sewage disposal project.

**Joe Saylor,** superintendent of the municipal water department at Elkin, N. C., has been named city supervisor. In his new post he will continue to head the water department as well as the sanitary and street maintenance departments.

**Sam C. Watkins,** former assistant resident engineer on a naval railroad project at Shelton, Wash., has returned to his former work with the U. S. Army Engineers at Portland, Ore. He is now assigned to field investigations on new work.

## Colonel Wyman's record attacked and defended

The war construction record of Col. Theodore Wyman, Jr., who was district engineer in the Hawaiian Islands for the Corps of Engineers at the time of the Pearl Harbor attack, was severely criticized and defended last week.

On Oct. 6 that part of a report by the Army Pearl Harbor board dealing with the Hawaiian construction operations under way on Pearl Harbor day was released. It concluded that Col. Wyman had committed three overt acts: (1) That he knowingly made a false official statement as to his knowledge of the alien status of Hans Wilhelm Rohl of the Rohl-Connolly Construction Co., which had joined with other builders to do Pearl Harbor construction under the firm name of Hawaiian Constructors; (2) that he refused to accept the low bid of certain contractors; and (3) that he made irregular purchases of equipment from contractors." It was also charged that Col. Wyman was a poor administrator, lacking in leadership, and that his conduct was unbecoming an officer of the U. S. Army.

In a statement also made public Oct. 6, Secretary of War Patterson defended Col. Wyman's record and recommended that no disciplinary action be taken. He stated, "there is nothing in the report of the Army Pearl Harbor Board or in the evidence adduced before it, and nothing in the subsequent investigation that has been made under the direction of the Secretary of War which indicates that any conduct on the part of Colonel Wyman or of Rohl or of any of the other contractors in Hawaii contributed in any way to the Pearl Harbor disaster. Nor do I find any evidence that Rohl or anyone else connected with the construction in Hawaii gave any information of any character to the enemy, or was disloyal in any way to the United States. Neither do I find that there was any intentional delay in the construction work by Colonel Wyman or any of the Hawaiian contractors."

Regarding the awarding of contracts, Secretary Patterson concluded: "An examination of the bidding records discloses no instance where the low bid was not accepted. The testimony to the contrary before the board is directly contradicted by the written record."

Secretary Patterson also said, "While there is conflicting evidence in the report as to the character of the work done in Hawaii, it is noted that the criticisms are directed principally to methods and that there is substantial testimony to the effect that the construction work as a whole was well done.

"It may be pointed out that Colonel Wyman has already, in effect, been penalized by the charges made against him," Mr. Patterson said. "In all probability, but for the board's report and the pending investigation, Colonel Wyman would have received at least one promotion. He was in charge of the port at Cherbourg during the critical months of the Normandy invasion and performed one of the outstanding construction and operating tasks of the European Theater. His contribution to the success of the operations in France and Germany earned for him a well-deserved Legion of Merit."

## P. H. Bates retires from Standards Bureau staff

The National Bureau of Standards has announced the retirement of Phaon H. Bates, chief of the bureau's Division of Clay and Silicate Products, and a member of the staff since 1910. Mr. Bates is succeeded by Douglas A. Parsons, a civil engineer, formerly assistant chief of the division.

A native of Pennsylvania, Mr. Bates was graduated from the University of Pennsylvania as a chemist, and was a member of the chemical staff of the Pennsylvania Railroad until 1906, when he joined the staff of the U. S. Geological Survey at its Pittsburgh laboratory. When that laboratory's functions were divided between the newly established Bureau of Mines and the National Bureau of Standards, Mr. Bates was transferred to the latter.

P. H. Bates

Long a leader in the development of testing methods, Mr. Bates became president of the American Society for Testing Materials in June, 1944 serving until June 30 of this year. He is a member of the American Concrete Institute, of which he was also president (1934-1936); the American Ceramic Society, and other organizations.

Mr. Parsons, a native of Iowa, received a civil engineering degree from Cornell College, Mt. Vernon, Ia., and joined the bureau technical staff in 1929.

D. A. Parsons

He was recently elected president of the American Concrete Institute.

## Want engineer jobs for civil service employees

Objections to a $77,000 contract let to Clyde Kennedy, consulting sanitary engineer, by the San Francisco Board of Public Works, were voiced on Sept. 27 by city civil service employees' representatives. Mr. Kennedy's contract calls for drawing plans for a sewage treatment plant serving an industrial area in the vicinity of Hunters Point.

In making the protest spokesmen for city employees argued that there were sufficient capable civil service engineers available in the city engineer's department to perform the work, which forms part of San Francisco's sewage disposal improvement project (*ENR* Nov. 16, 1944, vol. p. 325).

W. L. Henderson, secretary of the Civil Service Commission, said he would ask city Attorney John J. O'Toole for an opinion on whether the board of public works had the right to propose a contract with a private firm if the engineer's office had capable workers.

H. C. Vensano, public works director said he would not have signed the contract until sure the city did not have manpower immediately available, although legally the board can have work done by any group it may choose. In order to get this postwar project under construction as soon as possible Mr. Vensano chose a private firm.

Observers saw in the protest a move by the Civil Service Commission to have all public works contracts sent to them for approval.

## Name members for Illinois engineer board

Thomas Clark Shedd, professor of structural engineering at the University of Illinois, has been named chairman of a nine-member Professional Engineer Committee created by an act of the Illinois General Assembly early this year.

The new committee has power to determine qualifications of applicants for engineering certificates, prescribe rules for examinations, and aid the state department of registration and education in administering the law. All practicing engineers in the state may be automatically certified provided they apply for certificates before July 20, 1946. Engineers in the armed services at the time of the enactment of the law may also be automatically certified.

Other members of the committee include: Frank F. Fowler, Chicago consulting engineer, secretary; and E. Roy Wells, engineer for the Illinois Postwar Planning Commission.

## Congress gets bill to stabilize construction

A bill (S. 1449) aimed at partial stabilization of the construction industry was introduced in the Senate last week. Among other things, the measure creates a Construction Policy Board composed of the Secretary of Commerce as chairman, the Secretaries of Labor and Agriculture. This board would be a policy-forming agency making recommendations to the President and Congress.

In formulating policy, the board would be aided by two committees: A Public Works Stabilization Committee with the Federal Works Administrator as chairman and members including the Chief of Engineers, the Commissioner of Reclamation, and the Director of the Bureau of the Budget; and a construction Industry Advisory Committee which would assist the board. This body would represent a cross-section of the construction industry, including labor, builders, architects and engineers, and manufacturers and distributors of building supplies.

Seeking to have a $5 billion backlog of useful non-federal public works awaiting construction at all times, the bill would also provide for the advanced planning of local public works, though a $150,000,000 revolving fund to make possible non-interest bearing loans or advances to local governments.

The bill also gives the President authority to direct federal agencies to accelerate or defer federal construction.

# Seek authorization for $362 million of public building construction

***Bill introduced in House would approve over 4,000 PBA projects, including $169,000,000 worth of work in Washington, D. C., area***

Authorization for the Public Buildings Administration to construct buildings estimated to cost $362,000,000 is sought in a bill (H.R. 4276) introduced in the House Oct. 3.

With the proposed legislation, a list of 4,020 "eligible" projects totalling $774,795,000 outside the District of Columbia was submitted. Most of the projects are part of a long-range PBA program. The measure, if enacted, would authorize $169,245,000 for work in the District of Columbia area, and $193,000,000 for a limited number of urgently needed projects away from Washington, which would be selected from the "eligible" list.

Most of the listed projects are post offices—including a large number that may not be built for several years, since any location where gross postal receipts are $10,000 annually is "eligible" for a post office building. In addition, the buildings include hospitals for the Public Health Service, court houses and office buildings.

Largest projects are located in or near Washington. The $169,245,000 worth of work in this area includes: Additional facilities for the General Accounting Office, $18,900,000; new State Department building, $18,000,000; a Navy Department building, $46,500,000; extension of the New War Department building (which should not be confused with the Pentagon building), at a total cost of $29,500,000 for the present structure and the extension, and administrative offices for the National Bureau of Standards, $3,650,000.

Also planned for the Washington area are: Facilities for storage of film records of the National Archives and the Library of Congress, $5,000,000; a building for the storage of valuable records of the federal government, $6,500,000; a federal office building, $20,000,000; an operational facilities building for the PBA, $2,800,000; historical museum, $6,600,000 and an engineering and industrial building of the nation, $9,150,000, both for the Smithsonian Institution; and additional facilities at the National Zoological Park, $2,645,000.

## Ontario to enlarge De Cew Falls power plant

Enlargement of the new De Cew Falls water power station of the Hydro Electric Power Commission of Ontario will start soon at the cost of $7,000,000, according to T. H. Hogg, commission chairman.

Present capacity of the De Cew Falls installation is 120,000 hp. Of this total, 50,000 hp. is generated in the old station, one of the oldest in the hydro system, and 70,000 hp. in the one unit installed in the new De Cew Falls plant, officially opened October 15, 1943 (*ENR*, Nov. 4, 1943, vol. p. 661).

When the new station was built, the headworks canal, headworks and intake structure were built for final installation of two units. The second unit is now to be installed.

Water for the station is derived from diversion of water from the Arctic watershed by means of the Ogoki diversion works, north of Lake Superior—1,000 miles away from the plant.

Involving the expenditure of about $1,000,000, over a 5-year period, a new program for complete reorganization of the transmission, distribution and substation facilities in the Fraser Valley territory has been announced by the British Columbia Electric Railway Company, Ltd.

# JOBS OF THE WEEK

***DEPARTMENT STORE, Pasadena, Calif.***

P. J. Walker Co., Los Angeles, will build department store for Bullocks Inc., Los Angeles, to cost approximately $3,000,000. Wurdeman & Becket, Los Angeles are the architects.

***SAN DIEGO AQUEDUCT, San Diego, Calif.***

United Concrete Pipe Co., Los Angeles, was the lowest bidder at $3,361,088 for concrete pipeline and structures, for the San Diego Aqueduct, when the Bureau of Yards and Docks, Arlington, Va., opened bids.

***SUPERSTRUCTURE for BRIDGE, Washington, D. C.***

Dravo Corp., Pittsburgh, Pa., was the lowest bidder at $2,497,590 for constructing the superstructure for Capitol Street Bridge when District Commissioners, Washington, D. C. opened bids.

***TORRESDALE PUMPING STATION, Philadelphia, Pa.***

Ralph Herzog Co., Philadelphia, Pa., was the lowest bidder at $1,127,244 on the Torresdale Pumping Station when the Department of Public Works, City of Philadelphia, opened bids.

***DEPARTMENT STORE.***

C. R. Peck, Los Angeles, Calif., has been awarded a contract for a 3 story, reinforced concrete department store by Broadway Department Store, Los Angeles, Calif., at $1,500,000. A. B. Gardner, Los Angeles is the architect.

**Note—Additional bidding and contract news on many projects large and small, including the above items, appear in the Construction News section beginning on page 16.**

# ENGINEERING SCHOOL NEWS

***Only ex-service men admitted to first year classes at Toronto in 1945—New buildings at Stevens and Rochester***

Ex-service personnel only will be admitted to the first year in engineering at the University of Toronto. More than 900 students have already applied for admission, over 600 being ex-service men. Only 400 students will be accepted for the regular first year, and all will be selected upon the basis of length of service in the armed forces of Canada. Those not now accepted will have to wait until the start of the special first year of study at the Ajax munitions plant building due to open in January. Such students will complete their studies next summer and be able to enter their second year next September.

There will be a 5 to 10-year famine in technical personnel unless education in science and engineering is reestablished immediately on a large scale, according to Dr. Linton E. Grinter, dean of the graduate school and vice-president of Illinois Institute of Technology, Chicago, Ill.

Dr. Grinter said that at the peak of technical employment in 1940 there were about 280,000 engineers and 70,000 chemists, physicists, and mathematicians in the United States. These were needed to operate properly industries employing 35 to 40 million people. Then colleges were graduating 14,000 engineers and 3,000 scientists each year. In contrast to a normal 14,000 engineering graduates, the number of civilian senior engineers in college last fall was 2,940.

If this country is to provide 60,000,000 postwar jobs, there will be needed at least 100,000 additional engineers and scientists, a considerable percentage of whom cannot be trained in less than four academic years, and a small percentage of whom require a minimum training period of at least seven years, Dr. Grinter said.

The gift of a new field house to Stevens Institute of Technology, Hoboken, N. J., presented by the Charles Stewart Mott Foundation of Flint, Mich., is announced by Dr. Harvey N. Davis, president of the institute. Mr. Mott, president of the foundation, is a director and former vice-president of General Motors Corp., a pioneer in the automobile industry, and an alumnus and trustee of Stevens. Work will be started this fall and the building will be ready for use early next spring. The estimated cost is $110,000. The architects are Voorhees, Walker, Foley and Smith. The original design for the building was made by I. Howland Jones of Andrews, Jones, Biscoe and Whitmore.

William A. Clark of the staff of the Rochester, N. Y., Institute of Technology has been appointed chief engineer for the institute's new $700,000 building project, it is announced by Dr. Mark Ellingson, president. Mr. Clark, who will take over construction of the new unit, a part of a $2,220,000 development program, is a graduate of Massachusetts Institute of Technology and a consulting engineer and surveyor of extended experience. During World War I he was a captain in the Army's Corps of Engineers.

Contributions to the North Carolina State College Engineering Foundation now total $63,350, and Dean J. H. Lampe of the engineering school reports that the college hopes to appoint soon a full-time director of its engineering experiment station, improve its curricula and increase its personnel and facilities.

Wilfrid C. Polkinghorne will become professor of civil engineering, and Ernest J. Townsend professor of the newly created department of engineering administration at the Michigan College of Mining and Technology.

## *Latin nations look to postwar building*

Looking to their own needs, many South American nations are already well on their way to comprehensive postwar construction programs.

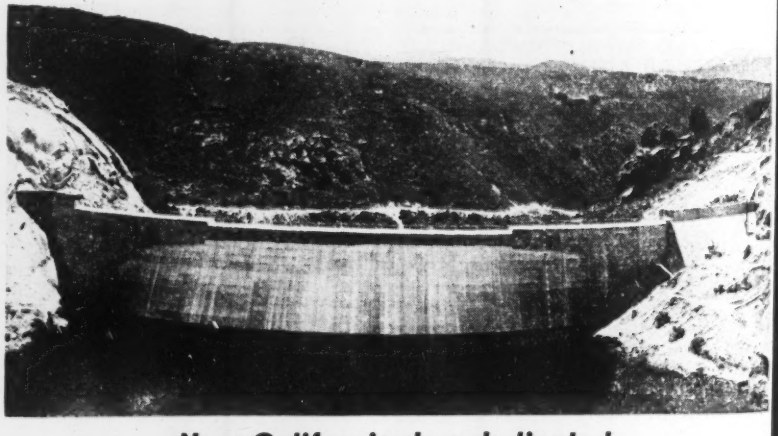
According to a release by the Office of Inter-American Affairs, the more important developments during the past week include:

Venezuela is planning to undertake its first public housing project on a large scale. Under construction in the "El Silencio" district of Caracas are seven modern apartment buildings containing one thousand apartments with a capacity of 5,000 persons. Space is also available for 400 business sites, with athletic fields, collective laundries and dining rooms, theatres and schools provided.

Total cost of the project is estimated at $2,580,000, financed by Venezuela capital.

The National University of Chile has announced plans for construction of a complete university city which will eventually cover about 170 acres. The "city" will include a central unit of dining rooms, dormitories, study halls and libraries; with laboratories, a hospital clinic, motion picture theatres, concert halls and student lounges laid out in surrounding areas.

Works projects to be carried out in Puerto Rico during the fiscal year 1945-46, amounting to $44,042,485, have been approved by the Island Planning Board.



## *New California dam dedicated*

*Lake Loveland Dam and reservoir on the Sweetwater River in southern California has been completed by the California Water & Telephone Co. of National City, Calif.*

*The $2,000,000 radial-arch concrete structure impounds water that will create a reservoir of 25,387 a.-ft. for release into Sweetwater Lake as needed. Dedicated in mid-September, the dam is 566 ft. long, 224 ft. high and will furnish irrigation water for 3,500 acres.*

*Field engineer in charge of the project was Charles P. Williams, and Macco Construction Co. of San Diego was contractor.*

## OBITUARY

**Theodore Hugh Sompayrac,** 70, a builder who had helped in the reconstruction of Jacksonville, Fla., after the great fire in 1901, died Sept. 29 in Jacksonville.

**Arthur L. Butler,** 69, a civil engineer for the Boston, Mass., Elevated Railway for 45 years, died in West Somerville, Sept. 27. Born in St. Johnsbury Center, Vt., he worked for the Boston & Maine Railroad before being employed by the Elevated.

**Calvin White,** 92, died Sept. 28, in Mineral Ridge, Ohio. He was former city engineer at Warren, and Trumbull County surveyor and civil engineer.

**Paul Culler,** 37, engineer and head of the Cocoa, Fla., city waterworks department, died Sept. 29.

**Clifton H. Hallman,** 28, a former civil engineer for the Young & Croasdell Engineering Co. of Jacksonville, Fla., and for the last two years in the U. S. Navy, was killed in a plane crash Sept. 29 at Kingsland, Ga. A Navy chief specialist, he was an honor graduate of the University of Florida School of Engineering.

**Charles Victor Burghart,** 66, vice president and treasurer of Bates & Rogers Construction Corp., Chicago, died Sept. 26, at Bannockburn, Deerfield, Ill. His first work was for the Chicago, Milwaukee & St. Paul Railroad. In 1901 the Bates & Rogers Construction Co. was founded by Onward Bates and W. A. Rogers, and Mr. Burghart went to work for the firm as one of the first employees. At the time of his death he was the sole survivor of the original organization. He worked his way to the top and had been vice president and treasurer for over 20 years. Mr. Burghart served on various committees of the Associated General Contractors, of which his firm was a charter member.

**Wallace Corbin Applegate,** 47, died Sept. 30 after 25 years of service with the Illinois Division of Highways. At the time of his death he was employed as statistician in the bureau of construction, Springfield, Ill.

**William Elton Mott,** 77, Burlington, N. J., retired dean of engineering of the Carnegie Institute of Technology, died Oct. 5. Born in Burlington, Mr. Mott attended the University of Pennsylvania and was graduated in 1899 from the Massachusetts Institute of Technology. He taught engineering at Cornell University and M. I. T. and joined the faculty of the Carnegie Institute in 1900. Seven years later he was made dean of the engineering school.

**John A. J. Papineau,** 75, who was employed in the city engineer's office at Rochester, N. Y., for 30 years, died Oct. 4.

**Edwin F. Fitzgerald,** surveyor for Tazewell County, Ill., died recently in Pekin, Ill. In addition to his work with the county, Mr. Fitzgerald did much of the city work.

**Lawrence J. Kane,** 58, Binghamton, N. Y., a contractor who for a quarter of a century had been engaged in erecting public buildings and in other construction, died in Baltimore, Md., Sept. 25. For a number of years prior to 1937 he was associated with Vincent J. Smith under the firm name of Kane & Smith.

## Much reclamation work planned for Colorado

Plans for spending about $40,000,000 in western Colorado for an extensive reclamation program were announced recently by Clifford H. Stone, director of the State Water Conservation Board.

Included in the recommendation were developments at the Vallecito, Mancos, La Plata, Paonia, and Silt projects in the San Luis Valley and in the Colorado Big Thompson region. Flood control for Cherry Creek and in the Colorado Springs area were listed as primary objectives of the plan. Three reservoirs for flood control purposes were proposed for the Kansas River and the Republican River.

A survey of Platte River reservoirs, in compliance with a U. S. Supreme Court order calling for full administration of the river, was also approved by the board.

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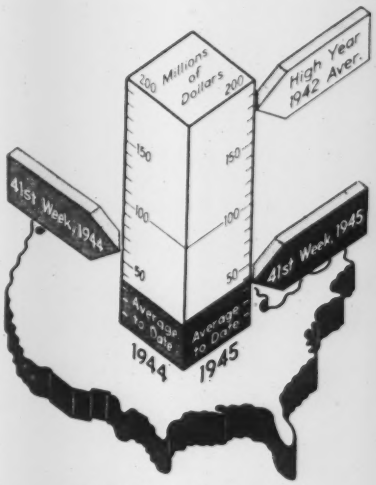
With heavy earth-moving equipment and a crew half made up of World War II veterans, excavation has started on the first 5.6 mi. of California's 160-mi. Friant-Kern Canal. (*ENR* Aug. 23, vol. p. 213).

Excavation on the project will progress at the rate of 4,000 cu. yd. a day for a year, and peak employment of this first section of the canal will reach about 400 men. Bureau of Reclamation spokesmen believe that as other units are built, crews will have a maximum of 2,500 workers.

## CONSTRUCTION ACTIVITY




As Reported This Week to... *Engineering News-Record*

### CONTRACT VOLUME

Continental U. S. Only (Thousands of Dollars)

| | Week of Oct. 11 1945 | Cumulative 1945 (41 wk.) | Cumulative 1944 (41 wk.) |
|---|---|---|---|
| Federal | $3,636 | $684,373 | $958,997 |
| State & Mun. | 7,238 | 275,748 | 204,780 |
| Total Public | $10,874 | $960,121 | $1,163,777 |
| Total Private | 22,332 | 644,070 | 299,993 |
| **U. S. Total** | **$33,206** | **$1,604,191** | **$1,463,770** |

### WHERE CONSTRUCTION ACTIVITY ORIGINATED THIS WEEK

| Type of Work | Dollar Volume (Thousands) This Week | Cumulative 1945 (41 wk.) | Cumulative 1944 (41 wk.) |
|---|---|---|---|
| Waterworks | $175 | $40,835 | $25,938 |
| Sewerage | 941 | 26,310 | 25,855 |
| Bridges | 802 | 28,215 | 12,389 |
| Highways | 4,214 | 177,780 | 167,521 |
| Earthwork, Waterways | 2,459 | 42,563 | 58,258 |
| Buildings, Public | 1,144 | 417,845 | 555,914 |
| Industrial | 10,618 | 400,963 | 140,727 |
| Commercial | 11,013 | 166,619 | 115,777 |
| Unclassified | 1,840 | 303,061 | 361,391 |

NOTE: Minimum size projects included are: Waterworks and waterway projects, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

### NEW PRODUCTIVE CAPITAL

| | Cumulative 1945 41 wk. | Cumulative 1944 41 wk. |
|---|---|---|
| NON-FEDERAL | $631,446 | $354,550 |
| Corporate Securities | 150,531 | 96,845 |
| State and Municipal | 317,315 | 116,765 |
| RFC Loans | 24,600 | 57,940 |
| REA Loans | 60,000 | 20,000 |
| Fed. Aid, Highway | 79,000 | 63,000 |
| FEDERAL | $1,049,898 | $1,263,800 |
| Total Capital | $1,681,344 | $1,618,350 |

### ENR INDEX NUMBERS

| Index Base = 100 | | 1913 | 1926 |
|---|---|---|---|
| Construction Cost | Oct. '45 | 309.28 | 148.67 |
| Building Cost | Oct. '45 | 240.35 | 129.93 |
| Volume | Sept. '45 | 164 | 72 |

# CONSTRUCTION REPORTS

*Compiled by Business News Department—Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.*

*ELSIE EAVES, Manager* *SCOTT McLEOD, Statistics* *J. A. MAHONEY, Reports*

**(Daily service also available—Write for details)**

## WATER SUPPLY

### BIDS ASKED

*Bids Asked October 16*

**R. I., Pascoag**—Pascoag Fire Dist. Operating Comn., District Office, Pascoag, new pump. station and 8 in. connection at Smithfield. To exceed $15,000. Plans deposit $25. Jenks & Ballou, 2600 Industrial Trust Bldg., Providence, engrs. CD 3/13—ENR 3/15.

**Wis., Luxemburg**—Village, C. Ross, clk., Village Hall, water and sewer mains, steel elevated storage tank and tower, deep well, furnish c.i. pipe and fittings, valves, hydrants, valve boxes, etc. $150,000. McMahon Engrg. Co., Menasha, engr. CD 8/14—ENR 8/16.

*Bids Asked October 17*

**O., St. Mary's**—City, City Hall, WW imprvs., Contr. B, water softening plant, housing 2 deep well type turbine pumps and piping at South well field. $120,000. F. G. Browne, Marion Bldg., Marion, engr. CD 6/21—ENR 6/28.

*Bids Asked October 18*

**Neb., Papillion**—City, O. F. Denker, clk., City Hall, WW sys. $25,254. H. H. Henningson, Standard Oil Bldg., Omaha, engr.

**†Wash., Rock Island**—Bonneville Power Admin., P. O. Box 3537, Portland, Ore., drilling well, Columbia substation.

*Bids Asked October 19*

**Ore., Portland**—City, City Hall, 36 in. welded steel pipeline from S. E. 60 St. to Washington Park Reservoir. $400,000. Extended date. B. S. Morrow, City Hall, city engr. CD 10/2—ENR 10/4.

*Bids Asked October 20*

**Calif., Antioch**—City, City Hall, water distr. lines, consisting 24 in. boxes, manholes, specials, and necessary fittings in final testing and sterilization of the line. Over $15,000. Plans deposit $25. J. S. Bates, 3134 Eton Ave., Berkeley, engr. CD 6/14—ENR 6/28, under Postwar Projects.

*Bids Asked About November 5*

★**O., Lima**—City, City Hall, earthwork reservoir, pump. station and 8,000 ft. 30 to 54 in. steel pipeline. $500,000. Jones & Henry, Toledo Trust Bldg., Toledo, engrs. CD 8/21—ENR 9/6 under Postwar Projects.

**O., Napoleon**—City, City Hall, exten. WW plant, $100,000. Jones & Henry, Toledo Trust Bldg., Toledo, engrs. CD 8/2—ENR 8/23 under Postwar Projects.

**Wis., Wisconsin Rapids**—Waterworks & Lighting Comn., Wisconsin Rapids, river crossing and watermains. $50,000. Bids 9/26 rejected. Foth, Boyd & Porath, 409 E. Walnut St., Green Bay, engrs. CD 9/19.

### LOW BIDDERS

**Calif., Merced**—Merced Irrigation Dist. 25 and L Sts., received no bids Oct. 2, 10 continuous poured-in-place concrete pipelines in Irrigation Dist. **$30,000.** K. R. McSwain, Merced, ch. engr. CD 9/19—ENR 9/27, under BA.

**Calif., Richmond**—Farm Security Admin., Ely, Nev., water facilities on Panac Farmstead Water Assn., property, NWF-1-45, from T. Torkelson, Medford, Ore., **$31,805.**

★**†Calif., San Diego**—Yards & Docks Annex, Navy Dpt., Arlington, Va., Sept. 28, portion of San Diego Aqueduct, involving concrete pipeline and structures mile 29.9 to mile 46.8, Spec. 17270 NOY 13095, from United Concrete Pipe Corp., Box 1, Sta. H, Los Angeles, **$3,361,088.** CD 9/6—ENR 9/13.

**†D. C., Wash.**—U. S. Eng., 1 and Douglas Sts., N.W., Zone 25, Sept. 28, 36 in. rising main loop and 10 in. wash water lines, McMillan Filter Plant, Ser. 49-080-46-12, from Intercounty Constr. Corp., 4720 Baltimore Ave., Hyattsville, Md., **$28,900.** CD 9/21.

★**Pa., Phila.**—Dpt. P. Wks., Water Bureau, City Hall, Oct. 3, Contr. No. 133-WW1, Torresdale Pump. station, from Ralph Herzog Co., 1505 Race St., **$1,127,244.** CD 9/6—ENR 9/13.

**†Tex., Houston**—Federal Works Agency, Electric Bldg., Fort Worth, Sept. 25, WW imprvs., Tex. 41-664-F, from E. Niles, Texas City, approx. **$15,000.** CD 9/17.

### CONTRACTS AWARDED

**Calif., Huntington Park**—City, City Hall, 2 concrete water tanks, one Santa Ana and Salt Lake Sts., other Randolph and Bissell Sts., to Contracting Engineers Co., 2310½ W. Vernon Ave., Los Angeles, **$28,596.**

**Wis., Wisconsin Rapids**—Waterworks & Lighting Comn., Wisconsin Rapids, 400,000 gal. elevated steel water tank, to Pittsburgh-Des Moines Steel Co., Neville Island, Pittsburgh, Pa., **$69,550.** Bids 9/26. CD 9/19.

**Ont., St. Thomas** — Westminster Twp., watermains, to Towland Constr. Co. Ltd., 298 Dundas St., London, **$21,984.** F. A. Bell, Court House, engr.

Location of ENR Correspondents

*Symbols and Abbreviations Include:*

† Federal Government
★ Project of $500,000 or over
ENR Engineering News-Record
CD Engineering News-Record Construction Daily

*Projects—By Size*

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger; water supply, earthwork, waterworks. $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

*Classes of Construction*

(Name in order of Listing)

Water Supply
Sewers, Waste Disposal
Bridges
Streets & Roads
Earthwork, Waterways
Latin America
Public Buildings
Commercial Buildings
Industrial Buildings
Unclassified

*Stages Reported*

PROPOSED: (except Streets & Roads); BIDS ASKED (new announcements only). For full calendar, see also preceding issues of ENR);

LOW BIDDERS: On jobs below $500,000 value all low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.

CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.

Dates shown are of issue in which last previous report was published.

## SEWERS, WASTE DISPOSAL

### BIDS ASKED

*Bids Asked October 15*

**N. Y., North Hempstead**—Supt. Hys., Town Hall, Manhasset, storm drain, box culvert, manhole and catch basins, etc.

*Bids Asked October 16*

**Ia., Onawa**—City, H. Skevington, clk., sewage treatment plant, incl. lift station, control house, primary tank, control chamber, rock filter, digester, secondary tank, sludge bed, sewers, outlet sewer, piping, water sys. Buel & Winter, 508 Insurance Exchange Bldg., Sioux City, engrs. CD 4/27/44—ENR 5/18/44, under Postwar Projects.

*Bids Asked About November 1*

★**Calif., Los Angeles**—Submarine outfall sewer, Hyperion, extending 1 mile into ocean, either 1 line 12 ft. diam. rein.-con. pipe or 3 lines 7 ft. diam. rein.-con. pipe, or 3 lines 7 ft. diam. C.I. pipe, $2,000,000. L. Aldrich, City Hall, city engr. CD 2/14—ENR 3/8 under Postwar Projects.

*Bids Asked June 1*

**Calif., Los Angeles**—Los Angeles Co., Hall of Records, 1.57 mi. sanitary sewer, Ashworth and other streets, C. I. 1109. Bids 9/18 rejected. A. Jones, Hall of Records, engr. CD 9/24—ENR 9/27, under LB.

*Bids Asked*

**O., Cuyahoga Falls**—City, City Hall, incinerator on Monroe Falls Ave., adjacent to city's WW pump. station on 10 acre site, $100,000.

### LOW BIDDERS

**Calif., Bakersfield**—Arvin Sanitation Dist. of Kern Co., Court House, Bakersfield, Oct. 1, san. sewer line, Arvin Sanitation Dist., from B. C. L. Constr. Co., 3726 Lee St., Los Angeles, **$44,776.** CD 9/12—ENR 9/20.

**Calif., Sacramento**—City, City Hall, Sept. 28, trunk line sewer, 18 and North B Sts., from R. Goold & Son, Box 190, Stockton, **$90,072.** CD 9/19.

**Tex., Houston**—City, City Hall, storm sewers in Norhill addn. and on Graustark St., from Jno. J. Heffernan, 3252 Charleston St., Houston, **$82,812.** CD 9/28.

★**†Va., Norfolk**—Federal Works Agency, 18 and F Sts. N.W., Wash. 25, D. C., Oct. 2, substructure for sewage treatment plant, from E. & E. J. Pfotzer, Marlins St., Elkins Park, Pa., **$543,600.** CD 10/4 under LB.

**Va., Richmond**—City, City Hall, Oct. 2, rein.-con., culvert at Gillies Creek, from Luck & Black, Inc., Rothesay Rd. and Belt Line, **$44,823.** Gamble M. Bowers, Dpt. P. Wks., engr.

### CONTRACTS AWARDED

**Calif., South San Francisco**—City, City Hall, sanitary and storm sewers, streets, sidewalks, curbs and gutters, Brentwood Subdivision 1, to L. C. Smith, 1 and Railroad Sts., San Mateo, **$58,932.** Bids 10/1. CD 9/21, under BA—ENR 9/20, under Postwar Projects.

★**Md., Baltimore**—City, Bd. Awards, City Hall, sludge digestion tanks, etc., at Back River Sewage Disposal plant, to Frank Angelozzi & Sons, 123 S. High St., **$531,136.** CD 9/10—ENR 9/27 under Lti.

**Mich., St. Clair Shores**—Village, 27705 Jefferson Ave., 6 to 15 in. sanitary sewer with manholes and connections, to A. DiPonio, 16595 Prest St., Detroit, **$55,491.** C. Postiff, 1036 Majestic Bldg., Detroit, engr.

**O., Hamilton**—City, R. P. Rice, mgr., City Hall, exten. sanitary sewer trunk line from Hayes Ave., plant site of Fisher Body Co., to A. Hammer, Hamilton, **$32,776.** W. M. Smalley, City Hall, city engr. Awarded 9/29. CD 8/30—ENR 9/6.

**Ont., Peterboro**—City, E. A. Autram, clk., 11,700 ft. clay tile pipe sewers and 4 in. c.i. connections, to Low Constr. Co. Ltd., 225 Sterling Rd., Toronto, **$47,733.** CD 9/13.

## BRIDGES

### BIDS ASKED

*Bids Asked October 16*

**Iowa**—State Hy. Comn., Ames, bridges, culverts on local road out of Tripoli east, 4 rein.-con. box culverts, exten., and one 51x20 ft. rein.-con. slab bridges, FSN-811-B, Bremer Co.; on the primary road from U. S. 52 northeasterly to the Deere & Co. plant thence south toward Dubuque, 1 rein-con. box culvert and one 26x80 ft., continuous rein.-con. slabe bridges, FA-921 (1), Dubuque Co.: culvert on U. S. 20 west of Blairsburg between Section 6, Liberty Twp., and Sect. 33 Blairsburg Twp., FN-67, Hamilton Co.

*Bids Asked October 18*

**Florida**—State Road Dpt., Tallahassee, vertical lift span bridge over Govt. Canal, State Rd. 6, at White City, surfacing 2,864 ft. approaches, Gulf Co.; pier repairs and strengthening fdns. of West Bay bridge, State Route 10, Bay Co. J. H. Dowling, Tallahassee, state hy. engr.